

REMARKS

This Amendment is submitted in reply to the Final Office Action dated October 16, 2007. Applicant respectfully requests reconsideration and further examination of the patent application pursuant to 37 C.F.R. § 1.116.

Summary of the Examiner's Rejections

Claims 2-9 and 14-21 were objected to because the term "whereby" is grammatically awkward.

Claims 1-9, 11, 13-21 and 23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Morales (US 4,954,032) in view of Henningsson (US 6,670,869).

Information Disclosure Statement

The Applicant has submitted an Information Disclosure Statement which includes a legible copy of cited foreign patent document GB 1520420A to comply with 37 CFR 1.98(a)(2) as requested in First Office Action dated 7/27/06.

Summary of Amendment

Applicant has amended Claims 1-9, 11, 13-21 and 23. The Applicant has amended Claims 1, 13 and 23 to correct antecedent errors. No new subject matter has been added.

Applicant has also amended the Specification to correct various grammatical errors and reference/figure numbering errors. No new subject matter has been added.

Remarks regarding Claim Objections

Claims 2-9 and 14-21 were objected to because the term "whereby" is grammatically awkward. The Applicant has amended these claims to replace "whereby" with --wherein-- as suggested by the Examiner. As such, the Applicant respectfully requests the removal of these objections.

Remarks regarding § 103(a) rejections

Claims 1-9 and 11 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Morales (US 4,954,032) in view of Henningsson (US 6,670,869). The Applicant respectfully traverses the Examiner's rejections and submits the following remarks for the Examiner's favorable reconsideration. The Applicant respectfully submits that the Examiner's two references fail to teach or suggest each and every element of the amended independent Claim 1. The present invention recites a screw arrangement having a screw cavity for insertion of a threaded axle along which the screw arrangement is movably arranged, wherein the screw arrangement includes a first resilient part to eliminate an axial allowance and a second resilient part to eliminate a radial allowance. Additionally, claim 1 recites that the screw cavity at its inside is equipped with stationary semi-spheres that follow the turn of the threads of the threaded axle.

The Applicant respectfully submits that Morales and Henningsson taken alone or combined fail to teach or suggest the following claimed limitation "the screw cavity at its inside is equipped with stationary semi-spheres that follow the turn of the threads of the threaded axle" (e.g., see stationary semi-spheres 21 and 31 in FIGS. 2B, 3B and 4B). In the Office Action, the Examiner stated that Morales does not disclose stationary semi-spheres. To correct this defect, the Examiner cited Henningsson and stated it teaches stationary semi-spheres 28 for the purpose of eliminating a radial tolerance (see column 8, lines 60-65). Applicant respectfully disagrees that Henningsson corrects the defect of Morales. The Applicant has reviewed the specification and figures of Henningsson which describes the subject "stationary semi-spheres 28". And, the specification in Henningsson discloses the following:

"The spindle for the tuner 13 consists of two hollow parts; a lower, first spindle part 25 and an upper, second spindle part 26. The first spindle part 25 is slotted at a lower end so that four tongues 27 are formed at the lower end, extending essentially along the first spindle part 25. Each of these tongues 27 is sprung radially inwards towards the axis of symmetry of the first spindle part and is provided with a radially-protruding stud 28 that is in contact with the sliding surface 21. The studs 28 are preferably integral with the free end of the tongues 27. The free end of each stud 28 is essentially hemispherical in shape, but can,

for example, be in the shape of a larger or smaller part of a corresponding sphere. The spherical shape is intended to resemble that of a ball, which provides an optimized contact surface against the sliding surface 21, with a design of the sliding surface 21 that is described later...."

(see col. 6, lines 25-40 and FIG. 2).

As shown in FIG. 2, the studs 28 are attached to and radially-protruding from the first spindle part 25. The first spindle part 25 is clearly not a "screw cavity" and the radially-protruding studs 28 are clearly not located inside a "screw cavity" as is recited in pending independent Claim 1 (e.g., compare Henningsson's FIG. 2 to the pending patent application's FIGS. 2B, 3B and 4B). Moreover, the studs 28 have a spherical shape to provide an optimized contact surface against the sliding surface 21 within a bearing 20. Henningsson describes this particular feature as follows:

The sliding surface 21 of the bearing 20, which is shown in FIG. 3, has a regular star-shaped profile with eight points. At each point, the sliding surface 21 comprises two surface sections 37 on each side of the tip of the point. It is these surface sections 37 that come into contact with the hemispherical free end of the studs 28 and mean that the spindle can move along its own axis of symmetry. The star-shape of the sliding surface means, however, that the spindle cannot be rotated around its axis of symmetry as the studs 28 are in contact with the surface sections 37.

FIG. 4 shows a second embodiment of the bearing 20 with the studs 28 inserted in the through-hole 22 of the bearing 20. The first spindle part 25 has been sectioned immediately above the studs in order to provide a better illustration of how the tongues 27 with their studs 28 are located in relation to the sliding surface 21, which here has a square profile for contact with the studs 28. As in the first embodiment of the bearing 20, the hemispherical end of each of the studs 28 is in contact with two separate surface sections of the sliding surface 21.

(see col. 6, line 62 through col. 7, line 20 and FIGS. 3-4).

As shown in FIGS. 3 and 4, the first spindle part 25 and in particular the radially-protruding studs 28 are designed to come into contact with the sliding surface 21 in a manner where the first spindle part 25 can move along its own axis of symmetry but cannot be rotated around its axis of symmetry (for more a detailed discussion about this

feature see col 7, line 65 through col. 8, line 18). Thus, the radially-protruding studs 28 clearly do not "follow the turn of the threads of the threaded axle" as the claimed stationary semi-spheres do in the amended independent Claim 1. Henningsson's embodiments shown in FIGS. 7-8 do not cure these defects because the studs 28 are not located "inside a screw cavity" nor do the studs 28 "follow the turn of the threads of the threaded axle" as recited in amended independent Claim 1 (see col. 8, lines 21-43). Plus, Henningsson's embodiment shown in FIG. 9 does not cure these defects because the studs 28 interact with an external sliding surface 44 with a square profile (see col. 8, lines 44-58). Of course, Henningsson's external sliding surface 44 with a square profile is not a threaded axle and the studs 28 are not located "inside a screw cavity" nor do the studs 28 "follow the turn of the threads of the threaded axle" as recited in amended independent Claim 1. Accordingly, Applicant respectfully submits that the aforementioned substantial differences between Morales and Henningsson and the amended independent Claim 1 are indicative of the patentability of the present invention.

Furthermore, the Applicants respectfully submit that the Examiner's motivation for combining Morales and Henningsson in the first place is misplaced. The Examiner stated that "[i]t would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Morales and provide semi-spheres, as taught by Henningsson et al., for the purpose of eliminating a radial tolerance." Applicant respectfully submits that it is not the purpose of the claimed stationary semi-spheres to eliminate radial tolerance. Instead, the purpose of the claimed stationary semi-spheres is to provide "a small touching surface between semi-spheres and threads in order to achieve a low friction while said touching surface at the same time must be sufficiently large to stand pressures when moving the screw arrangement including, e.g., a tuner object, along the threaded axis" (see paragraph [0018] in the pending patent application). In fact, it is the purpose of the claimed second resilient part to eliminate a radial allowance. Accordingly, Applicant respectfully submits that amended independent Claim 1 and its associated dependent Claims 2-9 and 11 are patentable in view of the two cited references.

Claims 13-21 and 23 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Morales (US 4,954,032) in view of Henningsson (US 6,670,869). The amended independent Claim 13 recites a screw arrangement which has a "first resilient part", a "second resilient part" and a "screw cavity at its inside is equipped with stationary semi-spheres that follow the turn of the threads of the threaded axle". These limitations are similar to the ones in amended independent Claim 1 and as such the aforementioned remarks regarding the patentability of amended independent Claim 1 apply as well to amended independent Claim 13. Accordingly, Applicants respectfully submit that amended independent Claim 13 and its associated dependent Claims 14-21 and 23 are patentable view of the two cited references.

Conclusion

Applicant respectfully submits that all of the stated grounds of the objections and rejections have been properly traversed, accommodated, or rendered moot. Accordingly, Applicant respectfully requests reconsideration of all outstanding objections and rejections and allowance of pending Claims 1-9, 11, 13-21 and 23. The undersigned Attorney requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application. Respectfully submitted,



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